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Factors Affecting Land Titling during Regularization of Informal Settlements in Dar es Salaam Tanzania

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Abstract

The nature and characteristics of informal settlements in Tanzania indicates that informal landholders face a number of constraints attributable to weak land tenure security. In the beginning of 2016, the government undertook major initiatives to regularize informal settlements with limited success on land title uptake. This paper investigates the landholders' willingness to change land tenure status and constraints faced thereof based on a dataset of 228 questionnaires, interviews and focus group discussions from informal settlements land occupiers in three wards of Dar es Salaam City, Tanzania. The findings indicate that despite a relatively lower rate of land title uptakes in the study areas, landholders are relatively more willing to change their land tenure status. Among the constraints identified include the costs and longer time taken to process the titles which were observed to be the most serious obstacles. Moreover, the oldest age group was observed to be the most reluctant age group to change tenure status when compared to relatively younger age groups although they were mostly aware of the benefits of changing tenure status. Furthermore, the findings indicate that, during title processing, the oldest age group faced the least constraints among the age groups studied. Since the oldest age group are the majority landholders, their reluctance to process title documents significantly reduces the number of title documents issued. In terms of education, the findings show that the highly educated groups have relatively lower willingness to change tenure status than other education groups. Such observation suggests that the more a landholder is educated, the more he or she is aware of the title benefit but the less likely him or her is to process a land title document. In terms of policy implication, for the poor class in informal settlement, regularization cost reduction could be an effective means to facilitate take up of land titles during regularization program though the same policy initiative may not work among the highly educated. For the highly educated and probably the rich, an informality tax could work, provided cheaper mechanisms to collect such tax are devised.

Keywords: Informal land tenure, land tenure security, perceived protection of rights, regularization, Tanzania

1.0 INTRODUCTION

Informal Land Tenure (ILT) is a kind of tenure where landholders' rights are held without formal or official recognition by the government (Osskó, 2004). According to Osskó (2004), this kind of tenure is common in peri-urban areas of developing countries whereby development of land takes place without any specific planning or observance by government machinery, responsible for urban land management. According to Kironde (1995), this form of landholding is neither recognized by customary rules nor statutory laws. ILT is characterized by the following features; inadequate water supply, poor sanitation, overcrowding, dilapidated houses, hazardous locations, insecurity of tenure, poor accessibility and exposure to serious health risks (UN-HABITAT, 2012). ILT is however not a peculiar case for the Global South only. According to UN-HABITAT (2012), in North America, 13% of the population reside under some forms of ILT, while 25% in Asia, 35% in Western Asia and 24% in Latin America and Caribbean are also found in ILTs. According to De Soto (2000), in Philippines, 53% of all properties in cities are under ILT while in the country side, 67% of the properties were under ILT; in Peru, 53% properties in the cities and 81% in countryside were under ILT. In Haiti, 68% properties in the main city and 97% in the countryside have been reported by De Soto (2000) to be under ILT. These data suggest that ILT is not a local phenomenon but rather a global issue whose redress may require harmonized instruments.

In Africa, more than 90% of the land is unregistered whereby landholders claim their rights informally (Byamugisha, 2016). In sub-Saharan African countries, about 62% of all landholdings are under ILTs, hence residents live without legal recognition (UN-HABITAT, 2012). In Kenya, 71% of the urban and peri-urban dwellers are in informal (Mutisya & Yarime, 2011). A similar trend of informality is observed in Tanzania. According to Kyessi and Sekiete (2014), more than 50% of people in Tanzania are residing in ILT. Some similar observations suggest that in Tanzania, around 50% to 80% of urban dwellers are living under ILTs whereby Dar es Salaam City alone accounts for over 70% of such informality (Kombe, 2005). Despite of these upsurges in ILT, in many cities in developing countries and Tanzania inclusive, the importance of formal landholding is evident. Since the mid-nineteenth century, when state ownership systems

indicated failures across the globe, the systems of private land rights have gained prominence whereby bare land is presumed to accrue monetary value. With this accrual, formal land rights have been observed to have both high value and legal protection compared to most ILTs (Fitzpatrick, 2006). In this regard, Formal Land Titles (FLTs) entail clear information about ownership rights and hence reduce tenure uncertainties and increases the chances for collateral compared to ILTs (Feder & Feeny, 1991).

Despite the noted efforts to define land rights and document titles and the associated benefits, evidence shows that informal landholder's willingness to transit from ILTs to FLTs is very low (Byamugisha, 2016; Kusiluka & Chiwambo, 2018; UN-HABITAT, 2008). In Peruvian Regularization Program, under Agency of Formalization of Informal Property (COFOPRI) implemented from 1996-2004, throughout the eight (8) years of operation, only 1.5 million titles were issued to the informal landholders (UN-HABITAT, 2008). Byamugisha (2016) noted that in Rwanda, in December 2013, a total of 10.3 million plots were demarcated – 8.4 million plots were approved and finalized for titles, but only 6.1 million titles representing 60% were collected by the owners. The reluctance to climb up the Land Tenure Security (LTS) ladder can be explained by the several factors including costs of processing documented title, travel distance or transport cost, poor awareness on advantages of formal title, avoidance of land related levies and reliance on informal mechanisms which are used by informal dwellers to protect the held land rights.

As reported by Whittal (2014), legitimacy, legality and certainty are three most important pillars of LTS where land rights may be protected through certainity and social legitimancy regardless of the title documents held. Under ILTs, the informal mechanisms to protect land rights may be superior to FLTs leading to some of informal dwellers to be reluctant to undertake regularization or pick title document even where it is provided for free (Payne, 2000). No study has however, examined the association between the diverse tenure protection mechanisms and the resulting tenure security in informal settlement of developing countries, specifically in Tanzania. This study examines both constraints and benefits of transitioning through ILTs to FLTs in an attempt to understand whether such transitioning is worthy the efforts and energy invested. This understanding is crucial for both policy as well as practice, since the public resources employed to address constraints in land titling programs can then be justified based on the findings of this study and also practitioners can adopt appropriate level of enforcement after a clear understanding of potential resistance from informal dwellers in response to expected benefits of transitioning.

■2.0 LITERATURE REVIEW

2.1 Land Tenure Regularization Practice across the Globe

Land Tenure Regularisation (LTR) refers to an aggregate of activities, processes and procedures involved in transforming an existing informal settlements to a formal one by either generically extinguishing all rights of existing landholders and planning afresh for a coherent urban settlement or specifically by providing avenue for public services and infrastructures by marginally altering the quantum of rights enjoyed by existing landholders. The processes of regularization of informal land rights in developed countries started with the aim of increasing LTS among informal landholders. Practices of regularization were, however, initiated first in Canada in the 1960s where visitors were given a chance to apply for land in Canada. European nations, i.e. France, the Netherlands, Belgium and the United Kingdom also practiced regularization in the 1970s (Papadopoulou, 2005). According to Zakayo et al. (2018), regularization of ILTs was extended to Africa so as to help majority of urban informal dwellers to change their tenure status and benefit socially and economically from their land holdings.

From global perspectives there are a number of advantages in relation to regularization of ILTs. According to De Soto (2000), reguralized ILTs can allow landholder to use their land holdings in more economical manner as other planned and surveyed landholders. Thus, regularization of informal land rights (ILR) make the property capable of being divided, combined or mobilized to suit any transactions legally, and link asset to addresses. Regularized rights can further easily be enforced (protection by formal means), making the history of the property more symmetrical, and accessible, as well as networking individuals become feasible since it can enable the business agents to became accountable to both the society and the state. It is informed by Field and Torero (2006) that, in the US, it was observed that 70% of the loan was in collateral and only legal properties were under collateral. Also, Field and Torero (2006) observed that regularization program conducted in Peru which aimed at providing land titles to each landholder in informal settlement, led to increased access to credit from financial institutions by 60%. It was reported by Nwuba et al. (2013), whereas in Nigeria, the average of 65.67% properties were used as collateral – within 2005-2009 only landholders with titles allowed to acquire loan. Apart from the benefit of ease access to loan from financial institutions, in the Peruvian regularization programs Payne et al. (2009) noted that registered property had increased in values from 20% to 30%. Payne et al. (2009) further acknowledged that the Peruvian Regularization Program in Peru, has increased housing investment by 75% for the titled landholders compared to 39% of untitled landholders.

In terms of gender, Cantuarias and Delgado (2004) and Adams and Turner (2005) observed that the ability of women to successfully claim or contest for the land rights has been observed to be higher in regularized land than in otherwise (i.e. informal land). It has also been observed that an increase of LTS, increases co-ownership compared to previous status whereby women are segregated on land rights because of lack of legal enforcement (Makota, 2018). Furthermore, Galiani and Schargrodsky (2004) associated regularization with decline in number of pregnancies among young girls. In their study, youthful pregnance in formal areas was observed to be 8%, while in informal settlements, it was around 21%. Furthermore, FLTs may increase the expected return to investment in physical and human capital, while inferior property rights systems induce poor families to sacrifice the health of their children in favor of housing conditions (Galiani & Schargrodsky, 2004).

2.2 Informal Land Tenure Regularization in Tanzania

The informality and the need to address informality in Tanzania started before formation of land policy which was formed in 1995. Kyessi and Sekiete (2014) informed that in Arusha region (one of the city in the northern Tanzania), in 1992, it accommodated 86% of informal landholders, Mbeya City (a city in the southern highlands of Tanzania) had 80% of informal landholders by 1998 and Mwanza City (a city in the northern of Tanzania – south of Lake Victoria) hosted 59% informal landholders by 2002, with Dar es Salaam City accommodated 70% in the same year. There are different estimates of informality in housing in Tanzania. The estimates from published works range between 60% and 80% and even more (Abebe, 2011; Alananga, 2018b; Sheuya & Burra, 2016) – the fact is that informality in Tanzania attracts both the rich and the poor, and this causes heterogeneity in many settlements. This heterogeneity could be linked to the notable reluctance to abide by the government regularization plans (Limbumba, 2010; Lupala, 2002).

The issue of upgrading land tenure in urban areas was formerly introduced after formation of land policy in 1995 and Land Act of 1999. Under section 23 of the Land Act No. 4 of 1999, it provides guidance for the landholders to acquire Residential Licenses (RLs) as a mechanism to heighten LTS. The section describes that for a person to have residential license, the land should be a non-hazardous land, not reserved for public utilities and not surveyed. Similarly, the land may be urban or peri-urban area for the period of time for which the residential license has been granted. The section further explains that any person having no official land title from the date of commencement of the Land Act 1999 and have been occupied the land for not less than three years in an urban or peri-urban area with the exception of customary landholders and tenants, such person is deemed to occupy the land under RLs. RLs are granted by the local authority having jurisdiction in the area where the land is situated and the right is renewable after every five years. In order to emphasize the land policy requirement of land right registration for informal land rights, the issuance of RL was first implemented in 2004 with two phases of implementation that is 2004/2005 and 2005/2006, where each phase aimed to cover half of the properties in the main city, i.e. Dar es Salaam which were estimated to be 400,000 (Kironde, 2006). The emphasis of registration of land rights by issuance of RL and titles by regularization is needed to increase LTS and allow informal landholders to access credits from formal financial institution (Kironde, 2006).

Under Land Act No. 4 of 1999 section 57, it is suggested that regularization is required for the purpose of facilitating the recording, adjudicating, classification and registration of land rights in informally occupied land. Regularization of land can take place in urban and peri-urban area whether that land is within village land or not. Under section 58, the area is declared for regularization by the Minister for Land either for his own motion or request from urban authority within urban or peri urban area. Before declaration, residents are informed in advance about the regularization declaration within the areas for the purposes of getting their views and recommendations. If there is no hindrance to the proposed regularization, the area is declared for the implementation of the program. The implementation of regulation program in Tanzania is guided by the Urban Planning (Planning Space Standards) Regulations as per Government Notice No. 93 published on 9/3/2018. According to the Act, the plot is surveyed for residential usage by considering space standards based on the criteria specified in Table 1.

Table 1 Urban planning and space standards in Tanzania

S/N	Criteria	Sub-criteria	Specifications
1	Plot Size	Special area and unplanned settlements (Special case)	90 – 300m^2
		High density	301 – 600 m^2
		Medium density	601 – 800m^2
		Low density	801 – 1200m^2
		Super Low density	1201 – 2000m^2
2	Road Access	Primary Access	12 – 15m
		Secondary access	10 – 12m
		Tertiary access (one way)	4 – 8m
		Footpath	2 – 4m
3	Buffer Zone	seasonal river, streams, pond, and swamp from each side of the stream/ or from High Water Mark of Lake and Ocean	15 – 30 m
		seasonal river, streams, pond, and swamp from each side of the stream/ or from High Water Mark of Lake and Ocean	60 m
4	Special use of the land	Minimum distance between Petrol stations/Filling stations on opposite side of a road	The right of way in the particular road
		Minimum distance between Petrol stations/Filling stations along the same side of roads	200m
		Minimum distance between petrol stations/filling stations in Highly concentrated unplanned residential areas	500m Fenced with a strong concrete wall of a height of three meters
		Plot size for communication pylons/communication towers	20m x 20 m

Following the implementation of regularization programs throughout Tanzania by March 2018, it was estimated that about 103,065 plots had been surveyed (Kusiluka & Chiwambo, 2018). A number of benefits have been documented with regard to regularization projects. According to Makota (2018), apart from economic benefits of regularization, socially, regularization has increased the quantum of women's land rights in places where the programs were implemented. Sheuya and Burra (2016) note that people in informal settlement

who changed their Land Tenure Types (LTTs) from ILTs to FLTs managed to access loans easily from formal financial institutions. There are also Rregularization benefits that accrue because of increased market transactions and other investment related benefits (Alananga, 2018a; Alananga & Mwasumbi, 2019; Fernandes, 2011).

In terms of awareness on the benefits of regularization program, Makota (2018) noted a relatively higher awareness on the benefit of land regularization among women compared to men which attracted more regularization efforts among female's headed households. Similar cases were observed by Deere and Leon (2003) who argued that providing awareness education on land regularization to women, increases the chances that they will uptake title. It was further observed by Sheuya and Burra (2016) that people in informal settlement who changed their Land Tenure Types (LTTs) and were issued with Residencial License (RL) in Tanzania accessed loans relatively easily from certain financial institutions than those without RLs. This was due to changes of LTTs from informal (with sale agreement only) to RL documentation suggesting that even a slight recognition of informal rights could have remarkable impacts on the economies of household.

2.3 Conceptual Framework

A number of studies have investigated the reasons behind the reluctance among informal dwellers to pick formal land title even when they are offered at a highly reduced price. One such explanation is based on the relatively higher Perceived Land Tenure Security (PLTS) under ILTs compared to FLTs (Alananga, 2018a). Figure 1 summarizes the relationship between LTTs and the Perceived Protection of Rights (PPRs). It is suggested that regularization provides mechanisms to reconcile formal and informal land tenure systems and provide a protection mechanism. Under informal mechanisms of protecting land rights, informal landholders are associated with low perceived Land Tenure Security (LTS). Such lower LTS, however, may be enhanced through the provision of services, sale agreements during transactions and even political declaration of recognition. It was observed by Mahadevia and Gogoi (2011) that people in informal tenure perceive that they are being protected of their land rights when they were supplied with public utilities such as water supply and electricity. Simple declaration of a titling or regularized program by the government may also provide high PPRs to informal dwellers such that titling itself becomes less important (Payne, 2000).

Lanjouw and Levy (2002) informed that having any ownership documents such as Sale Agreement Document protected landholders from eviction by 17%. It was observed that having any document from the government, i.e. certificates issued by the electricity company increased the chance of being tolerated by the government against eviction. According to Mahadevia and Gogoi (2011), most of people in Rajkot, India own private land in informal settlement – for those with ownership documents called 7/12[1] document and those who have *Parch* right that is stamp paper documents or sale of deeds which are provided by the owner to use land, such land cannot be demanded by the third party without the consent of the owner and the state recognizes those documents and protect the rights of the landholders with the two documents against third party influence. Therefore, if dwellers hold any document, i.e. 7/12 and/or *Parch* document, they may have a higher perceived protection of land rights on the land owned which is called weak *de facto* LTS.

Lanjouw and Levy (2002) observed that in Ecuador, people under ILTs perceive a higher protection of their land holdings from the local authority which witnesses the transactions (actors). During the purchase of informal land rights, those who paid some amount to "the boss" that means informal local authorities, had also higher PPRs by 17%. FAO (2002) added that when people acquire land in informal areas, the protection against externalities should come from the community through community pressure and through local leaders. However, formal means of protecting land rights are associated with legal documents such as title deed, letter of offer or RL which tend to provide the highest level of LTS.

In Tanzania, ownership in land can be verified through written documents which have varying degrees of informality. In urban areas, an owner can hold a Residential License (RL) which is renewable after every five years or a title deed also called Certificate of Rights of Occupancy (CRO) which is renewable after 33, 66 and 99 years. The legality of all other forms of documents such as sales agreement is still debatable though its legalization by issuing CRO under the ongoing programs suggests that such documents are recognized by the government in unplanned areas. Figure 1 suggests that relatively higher LTS is an outcome of formal land rights holding rather than informal land rights protection mechanism and people should be attracted to formalize their rights when opportunities arise. Still, evidence manifested that such formal title documents in informal settlements are rare but perceived LTS tends to be relatively higher (Kironde, 1995; Moyo, 2006). This indicates that the response to regularization in Tanzania has been no different from the rest of the globe. Kusiluka and Chiwambo (2018) further observed that out of 103,065 plots that were upgraded for issuance of titles under the regularization programs, only 3,000 titles were not collected despite the fact that holders had paid all fees required. Understanding these contradictory observations is important for both policy and practices, specifically where policy direction is aligned in favor of land as a strategic resource for economic development.

In addition to PPRs from informal mechanisms to protect rights, a higher reluctance to undertake regularization even when it is highly subsidized, can emanate from landlord absenteeism which is a common phenomenon in many sub-Saharan African countries (Byamugisha, 2016). This is because some landholders reside outside of their countries and others fail to pay for their legal titles and hence abandon their land. According to Payne et al. (2009), regularization programs are associated with taxes and charges which landholders have not experienced before – these taxes and charges could fuel the observed reluctance. Similarly, informal mechanisms to protect rights such as high education and income, also referred to as Non-Transferable Rights (NTRs), could provide some explanations to the high reluctance to pick or process land title documents (Lanjouw & Levy, 2002; Payne et al., 2007). Furthermore, Payne et al. (2009) added that regularization programs have negative effects to low income tenants since regularization programs increase value of property and hence landlord takes advantage to increase rent and consequently, the property change dramatically in favour of higher income groups and ignoring low income earners who enjoyed some land rights before the process of regularization. Durand-Lasserve (2006) reports that regularization program affects low income earners since it exposes them to forced evictions or market-driven displacement, fearing eviction from their land after regularization could be the reason for reluctance. Payne et al. (2009) informed that regularization programs are disadvantageous to extended families and group rights, since under ILTs, holders enjoy use right and group rights but once

regularization has taken place, such benefits end. This was supported by Durand-Lasserve et al. (2006) that informal landholders have their informal mechanisms of protecting their land rights, i.e. de-facto tenure while regularization programs end enjoyment of de-facto tenure.

High Security										
Degree of security										
Low security										
Tenure category	Pavement dweller	Squatter tenant	Squatter 'owner'	Tenant in unauthorised subdivision	Urban legalisation	Owner in unauthorised subdivision	Legal owner Unauthorised construction	Tenant with contract	Lease-holder	Free-holder
Protection mechanisms	**No document**	**Social recognition**	**Structures in informal**	**Sale agreement document**	**Legal documents**	**Public services document**	**RL**	**Letter of offer**	**Title deed**	
Property rights										
To access services	x	x	x	x	x	x	x	x	x	xn
To access formal credit								x	x	xn
Legal enforcement							x	x	x	xn

Key:
X… Rights available
No…xn Highest LTS but do not exist in Tanzania

Figure 1 Land tenure security
(Source: Modified from Payne, 2004)

■3.0 METHODOLOGY

3.1 Description of the Study Area

This study was conducted in Dar es Salaam City in three wards of Chanika, Kitunda and Mzinga. Dar es Salaam is the city located in East Africa along the Indian Ocean – the city is located at 6°48´ south and 39°17´ east. The selection of the Dar es Salaam City was preferred than other cities due to several reasons; first, the nature of informality in Dar es Salaam is what attracts attention – it is growing at a very high rate around Dar es Salaam (Abebe, 2011). Second, the selection of Ilala Municipality was preferred because of the relatively higher rate of informality whereby the Municipality have 21,000ha and informality is 11,095 ha which is around 50%. Kinondoni municipality is rather more affluent with many planned settlements while Temeke municipality is predominantly informal. In terms of wards, other areas of similar nature could have been studied, but the selection of Mzinga, Kitunda and Chanika was due to the fact that informal tenure in Ilala is observed to increase mostly along Pugu road as informed by Mkalawa (2016). Thus, the three wards of Mzinga, Kitunda and Chanika were selected because they are aligned and serviced by the Pugu road. Table 1 describes the characteristics of each ward.

Table 2 Characteristics of selected wards
(Source: Researcher's compilation in May 2019)

S/No	Wards	Area (km^2)	Density (km^2)	Population in 2002	Population in 2012	% increase
1.	Chanika	58.8	747.1	23,272	43,912	47%
2.	Kitunda	19.6	2,908	23,300	57,132	59%
3.	Chanika	12	621	7,452	7,558	2%

This study reflects upon findings on these wards which were under regularization program since 2017, but at the time of this study, they were at different stage of completion as summarized in Table 2. Preliminary investigation was carried out to understand the status reached so far in terms of implementation. Table 3 subsequently shows the status of the program in terms of implementation date, time to the date of the research conducted and number of landholders paid for change of tenure status. The table also suggests that people are slowly participating into regularization process as the data reflect two years since establishment of the program in each sub ward, but payment for survey cost was below 50% among those with interest to change their tenure status.

Table 3 Regularization status in study areas
(Source: Researcher's compilation in May 2019)

Ward/Sub wards	Start	Recognized plot	Time to date	No. paid for survey	% paid	% not paid
Kitunda sub wards						
Kitundakati	Jul-17	1,824	2 years	500	27.4	**72.6**
Relini	Aug-18	2,000	1.5 yers	343	17.0	**83.0**
Mzinga sub wards						
Magole	2017	851*	2 years	400	47.0	**53.0**
Mwanagati	2017	3,882	2 years	1,460	37.6	**62.4**
Chanika sub wards						
Vikongo	Aug-18	4,560	1.5 years	456	10.0	**90.0**
Ngwale	Jun-18	2,567	2 years	380	15.0	**85.0**
Average					25.7	**74.3**

*people registered to survey their plot in sub ward office

3.2 Data Collection

The study applied mixed research approach where both quantitative and qualitative data were used (Johnson et al., 2007). Creswell (2014) added that there was no reason for the researcher to be confined into a single method while the findings can be best understood by applying both methods into the study. Respondents were chosen by spatial random sampling techniques whereby the researcher would walk along a road or path and select the first respondent at the corner point or a junction. A direction is adopted at the corner point and the researchers would select a target respondent after every 20 housing units. In sparsely populated areas the selections of respondents were mainly dependent on availability. As such sampling strategy can be considered a mix between spatial randomness and incidental. This sample selection process does not however bias perception and characteristics of the respondents based on response consistency observed in the data. A total number of 228 questionnaires were administered to landholders by the researchers and two field assistants.

3.2.1 Sample Size for Survey Data Collection

For quantitative data, the sample size was 228 and was obtained through the Slovin's formula as depicted in equation 1.

$$n = \frac{N}{(1 + Ne^2} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where,

$$\mathrm{N} = \text{Number of landowner's household} = \begin{cases} \text{Chanika ward} = 2405 \\ \text{Kitunda ward} = 4116 \\ \text{Mzinga ward} = 2017 \end{cases}$$

e = Confidence level 90%, marginal error which 10% = 0.1.

However, data from the National Bureau of Statistics (NBS, 2014) show that in Tanzania, on average around 76% of household own houses whereas in rural areas 89% own houses while in urban areas other than Dar es Salaam around 58% own houses and in Dar es Salaam only 37% own houses. According to Dillman (2000), the good response rate is 50% of the total sample size and above. According to Morton et al. (2012), in determining response rate in a study, the range from 18%-60% of the total sample size is reasonable to provide

valid results in a research. Therefore, the overall response rate of 79% in this study is perceived adequate for the validity of the results and conclusion of this study.

Table 4 Sample size for survey data collection
(Source: Researchers' compilation)

S/n	Ward	Number of House hold	Owner Household (37%))	Ideal Sample	Actual Responses	Response rate
1	Kitunda	6,500	2405	**96**	**71**	**74%**
2	Chanika	11,123	4115.51	**97**	**86**	**88%**
3	Mzinga	5,452	2017.24	**95**	**71**	**75%**
	Total		**521**	**289**	**228**	**79%**

The core variables included in the analysis of the relationship between willingness to take titles and perceived LTS based on PRP mechanisms are summarized in Table 5 to Table 10. The core indicators were computed as a proportionate Household Weighted Mean Score (HWMS), i.e. a proportion of the total possible weighted scores across factors (F) for each household (i). This is provided as:

$$HWMS_{fi} = \frac{Total\ weighted\ Score\ for\ household\ i}{Total\ Possible\ Score} = \frac{\sum_{f=1}^{F} w_{fi}}{\sum_{f=1}^{F} W_{fi}F} \quad \ldots\ldots\ldots\ldots\ldots \quad (2)$$

Whereas;
w_{fi} is the Likert scale weights for each factor f as evaluated by household i ranging from 1 - 6
W_{fi} is the highest value of the Likert weights, i.e. 6
F is the total number of factors

Based on equation 2, a number of indicators were computed as described in the following sections.

3.2.1.1 Land Tenure Security

This study uses land rights enjoyment as a measure of perceived Land Tenure Security. The aggregate indicator of LTS is computed from three constructs, i.e. general rights to use (Use) held land, the rights to control and the rights to transfer. The indicators utilised to measure each of these constructs are summarized in Table 5.

Table 5 Description of core indicators of LTS

Code	Name	Description	Abbrev.	Measurement
A	**Land Tenure Security**	**Measures the degree of perceived enjoyment of rights**	**LTS**	**ratio**
A1	**General Use Rights**	**An aggregate indicator based on A1.1 – A1.5**	**Use**	**ratio**
A1.1	Decision rights	decision making to use	UseDRP	Likert
A1.2	Apportionment	Apportion	UseAR	Likert
A1.3	Enjoyment	Enjoy	UseER	Likert
A1.4	Change of Use	Change use	UseCUR	Likert
A1.5	Wayleave	Wayleave	UseWLR	Likert
A2	**General Control Right**	**An aggregate indicator based on A2.1 – A2.5**	**Contr**	**ratio**
A2.1	Exclude others	Exclude others	ContrExc	Likert
A2.2	Control conflict	Control conflict	ContrConf	Likert
A2.3	Demand compensation	Demand compensation	ContrComp	Likert
A2.4	Control boundary	Control boundary	ContrBound	Likert
A2.5	Control way leave	Control way leave	ContrWl	Likert
A3	**Transfer**	**Transfer**	**Trans**	**ratio**
A3.1	Rent property	Rent property	TransRent	ratio
A3.1	Pass will	Pass will	TransWill	Likert
A3.2	Sell property	Sell property	TransSell	Likert
A3.13	Lease a property	Lease a property	TransLease	Likert
A3.4	Surrender	Surrender	TransSurr	Likert
A3.5	Mortgage	Mortgage	TransMort	Likert
A3.6	Court bail	Court bail	TransBail	Likert
A3.7	Bond the property	Bond the property	TransBond	Likert

3.2.1.2 Constraints in Informal Land Holding

Constraints in informal land holdings is measured based on three indicators namely legal, physical and personal constraints. The variables measured for each of these indicators are summarized in Table 6.

Table 6 Description of core indicators of constraints in ILTs

Code	Name	Description	Abbrev.	Measurement
B	**Constraints in Informal Land Tenure**	**An aggregate measure of the level of constraints facing informal landholders**	**CILTs**	**ratio**
B1	**Legal Constraints**	**Legal constraints**	**ConsLeg**	**ratio**
B1.1	Tangible legal evidence	Tangible legal evidence	ConsNolegEvi	Likert
B1.2	Legal witness	Legal witness	ConsNolegWit	Likert
B1.3	Legal enforcement	Legal enforcement	ConsNolegEnf	Likert
B1.4	Corruption	Corruption	ConsCorrupt	Likert
B2	**Physical Constraints**	**Physical constraints**	**ConsPhys**	**ratio**
B2.1	Flood constraints	Flood constraints	**ConsPhysFlood**	Likert
B2.2	Slope constraints	Slope constraints	**ConsPhysTerr**	Likert
B2.3	Access constraints	Access constraints	**ConsPhysAcc**	Likert
B2.4	Overcrowding constraints	Overcrowding constraints	**ConsPhysCrow**	Likert
B2.5	Lack of garbage site	Lack of garbage site	**ConsPhysNoDump**	Likert
B2.6	Poor sanitation	Poor sanitation	**ConsPhysUnSan**	Likert
B2.7	Absence of boundary demarcation	Absence of boundary demarcation	**ConsPhysDermac**	Likert
B3	**Personal Constraints**	**An aggregate measure of the level of personal constraints under informality**	**ConsPers**	**ratio**
B3.1	Lack of security	Lack of security	**ConsPersNoSec**	Likert
B3.2	Public water	Public water	**ConsPersNoWat**	Likert
B3.3	Lack of electricity	Lack of electricity	**ConsPersNoElec**	Likert
B3.4	People surround	People surround	**ConsPersAntisoc**	Likert
B3.5	Feeling about area	Feeling about area	**ConsPersNoAttach**	Likert
B3.6	About corruption	About corruption	**ConsPersCorr**	Likert

3.2.1.3 Willingness to Change LTTs

Willingness to change land tenure types is used as one of the dependent variable in this study. At an aggregate level, willingness to change land tenure reflects upon preferences on the different land title documentation or evidence to land ownership. In this regard, at one extreme, owner of CROs are expected to have no preference for change or at least lower because such a change would entail transiting down the tenure security ladder. At the other extreme, illegal tenures and other forms of ILTs are expected to have the highest preference for change towards FLTs. Based on this fact, the index of Willingness to Process Title (WPT) captures holistically how much an individual is willing to process a title and a value of 100%; (1) mean perfectly willing and zero (0) not willing. Since the willingness to process title ranges between 0 and 100, percentiles (5 groups) were used to stratify the index into five categories which were then used in cross tabulation. The variables for which data were collected for each of WPT indicators are summarized in Table 7.

Table 7 Description of core indicators of willingness to change from ILTs to FLTs

Code	Name	Description	Abbrev.	Measurement
C	**Willingness to Change Land Tenure**	**An aggregate measure of willingness to change land tenure type**	**WΔLTTs**	**ratio**
C1	No change	I don't want to change	TchangeNon	Likert
C2	Recognition	I want to be recognized	TchangeRec	Likert
C3	Any written document	I want any Written title Document	TchangeDoc	Likert
C4	Customary tenure	Customary tenure should be recognized	TchangeCust	Likert
C5	Anti-eviction	Only anti eviction	TchangeAntE	Likert
C6	Adverse possession	Only adverse possession	TchangeAdpos	Likert
C7	Group tenure	I want group tenure	TchangeGT	Likert
C8	CRO	I want a granted Certificate of Occupancy	TchangeCRO	Likert

3.2.1.4 Constraints in Land Tenure Change

Despite the willingness to change land tenure types ILTs to FLTs, landholder may be constrained by a number of factors. Based on this, the index of constraint in land tenure changes (CLTTs) captures holistically how much an individual is constrained during land title processing and a value of 100%; (1) mean perfectly constrained and zero (0) not constrained. Since the CLTTs range between 0 and 100, percentiles (5 groups) were used to stratify the index into five categories which were then used in cross tabulation. The degree at which the various constraints may prevent landholders from processing a formal title document is provided in Table 8.

Table 8 Core variable in measuring the level of constraint in land tenure change

Code	Name	Description	Abbrev.	Measurement
D	**Constraint in Land Tenure Change**	**An aggregate measure of the level of constraints in changing of land tenure**	**CΔLTTs**	**ratio**
D1	Cost	Cost constraints to process title	ChangeCCost	Likert
D2	Procedure	Long process to acquire title	ChangeCProc	Likert
D3	Time	Long time to get title	ChangeCtime	Likert
D4	Survey	Lack of access for survey	ChangeCCost	Likert
D5	Land	Hazardous areas	ChangeCCost	Likert

The possibility to protect rights using both formal and informal mechanisms has the potential in affecting willingness to process title. If landholders have higher possibility of protecting their rights using informal mechanisms, they are unlikely to process title documents and when such possibility is lower they are likely to process title. This link is however moderated by the time effect since circumstances facing the landholder differ from the time of purchase, during occupation and during disposition. As such, this study incorporates possible levels of protection of rights using different mechanisms at different times. A total of 10 PRP indicators were developed as summarized in Table 9.

Table 9 Core variable in measuring the level of PRPs

Code	Name	Description	Abbrev.	Measurement
E	**Perceived Protection of Rights**	**An aggregate measure of the assurance from PPRs**	**PPRs**	**ratio**
E1.	**Protection of rights**	**Aggegate measure of perceived protection of rights after purchase**	**PRPafter**	**ratio**
E1.1	Protection by construction materials	Construction materials	**PRPafterMater**	Likert
E1.2	Protection by use foundation	Use foundation	**PRPafterFound**	Likert
E1.3	Rented house near	Rented house near	**PRPafterReloc**	Likert
E1.4	Use of security guard	Use of security guard	**PRPafterGuard**	Likert
E1.5	Use of neighborhood	Use of neighborhood	**PRPafterNeigh**	Likert
E1.6	Farming the site	Farming the site	**PRPafterFarm**	Likert
E1.7	Use of wall	Use of wall	**PRPafterWall**	Likert
E2	**Documented protection of rights**	**Protection by documents after purchase**	DPRPafter	**ratio**
E2.1	Sale agreement	Sale agreement	DPRPafterSagre	Likert
E2.2	Ten cell leaders	Ten cell leaders	DPRPafterTenc	Likert
E2.3	Sub ward leader	Sub ward leader	DPRPafterSusL	Likert
E2.4	money	Money	DPRPafterInc	Likert
E2.5	Sale agreement	Sale agreement	DPRPafterSagre	Likert
E2.6	Will after possission	Will after possession	DPRPafterWill	Likert
E2.7	Court documents	Court doc	DPRPafterCord	Likert
E2.8	Public utilities	Public utilities	DPRPafterPutils	Likert
E3	**Actors protection of rights**	**Aggregate measure of actors protection of rights during phsical stay**	APRPdur	**ratio**
E3.1	Neighbors	Neighbors	APRPdurNeigh	Likert
E3.2	Ten cell	Ten cell	APRPdurTcell	Likert
E3.3	Sub ward	Sub ward	APRPdurSubL	Likert
E3.4	Estate agent	Estate agent	APRPdurAgent	Likert
E3.5	Lawyers	Lawyers	APRPdurLaw	Likert
E3.6	Relatives	Relatives	APRPdurrel	Likert
E4	**Physical protection of rights**	**An aggregate measure of physical protection of rights during stay**	**PPRPdur**	**ratio**
E4.1	Construction	Protection by use of building	**PPRPdurCons**	Likert
E4.2	Long Stay	Protection by long stay	**PPRPdurLstay**	Likert

Code	Name	Description	Abbrev.	Measurement
E5	Protection of rights through NTRs	**Protection by NTR during phsical stay**	**NTRdur**	
E5.1	Education	Education status	**NTRdurEduc**	Likert
E5.2	Political	Political status	**NTRdurPol**	Likert
E5.3	Social	Artist status	**NTRdurSoc**	Likert
E5.4	Economic	Income status	**NTRdurEcon**	Likert
E6	**Protection of land rights**	**Protection by legal document during disposition during disposition**	**DPRPdisp**	**ratio**
E.6.1	Sale agreement	Sale agreement	**DPRPdispSagre**	Likert
E.6.2	Will	Protection by will	**DPRPdispWill**	Likert
E.6.3	Court document	Use of court doc	**DPRPdispCdoc**	Likert
E.6.4	Public utilities	Use of public utilities	**DPRPdispPutils**	Likert
E7	**Actors protection of land rights**	**Actors protection during disposition during disposition**	**APRPdispo**	**ratio**
E7.1	Neighborhood	Neighbourhood	**APRPdispo**	Likert
E7.2	Ten cell	Ten cell	**APRPdispo**	Likert
E7.3	Sub ward	Sub ward	**APRPdispo**	Likert
E7.4	Estate agent	Estate agent	**APRPdispo**	Likert
E7.5	Lawyer	Lawyer	**APRPdispo**	Likert
E7.6	Relatives	Relatives	**APRPdispo**	Likert
E8	**Physical protection of Rights**	**Protection by living during disposition during disposition**	**PPRPdisp**	**ratio**
E8.1	Construction	Building structure	**PPRPdispCons**	Likert
E8.2	Long stay	Long stay	**PPRPdispLstay**	Likert
E9	**NTR protection of land rights**	**Protection by NTR during disposition during disposition**	**NTRdisp**	**ratio**
E9.1	Education	Education status	**NTRdispeduc**	Likert
E9.2	Political	Political status	**NTRdispPol**	Likert
E9.3	Social	Artist status	**NTRdispSoc**	Likert
E9.4	Economic	Income status	**NTRdispEcon**	Likert
E10	Boundary Protection of land rights	**Boundary protection after purchase**	**BPRP**	**ratio**
E10.1	Trees	Planting trees	**BPRPTree**	Likert
E10.2	Blocks	Blocks	**BPRPBlock**	Likert
E10.3	Beacon	Beacon	**BPRPBeac**	Likert
E10.4	Fence	Constructing a fence	**BPRPFence**	Likert
E10.5	Nature	Natural evidence	**BPRPNature**	Likert
E10.6	Wall	Constructing a wall	**BPRPWall**	Likert

3.2.1.5 Land Access Modes

The construct of land access modes is captured using four dummies on whether a landholder used any of the four approaches to acquire land or otherwise.

Table 10 Core variable in measuring the level of LAMs

Code	Name	Description	Abbrev.	Measurement
F	**Land Access Modalities**	**Means to get land in informal settlements**	**LAMs**	Nomino
F1	Government recognition	Government allocation	LAmGall	Dummy
F2	Inheritance	Inheritance	LAMInh	Dummy
F3	Long Possession	Long possession	LAMLPos	Dummy
F4	Purchase	Purchase	LAMPurch	Dummy

3.2.2 Interviews and Focus Group Discussion

Qualitative data were collected by the use of purposive sampling to collect opinions on change of tenure status through the reguralization process, experienced administration, managements and interpreted actions in relation to informal land rights. The selection of sample was based on the roles of the interviewees. It involved sub ward officials, ten cell leaders[2] and regularization officials and the interviews were done through official appointments. For interview purposes, the selection of ten cell leaders was done purposively based on long-term services and being a public figure in the areas. Thus, before selecting any person for interview, respondents of the questionnaire were asked of a famous leader in the area and the top ranking leaders were earmarked for interview. On the other hand, well-known local estate agents were selected purposively from the study area for FGD in a similar manner. Interviews were carried out with six (6) sub ward

leaders (WEOs/Chairman) from the six (6) sub wards. For the regularization program, the information was collected from six (6) officials each of whom having participated in one of the six (6) sub ward regularization activities. Table 11 shows the number of the respondents interviewed and the core concept being evaluated.

Table 11 Interviewed group and concepts explored group
(Source: Researchers' compilation, 2019)

Group	Ward	Subward	Interviewee's designation	Concepts explored
Sub ward officials	Chanika	Vikongoro	WEO	LAM, LRP, LTS, LTT, PPR
	Kitunda	Kitundakati	WEO	
		Kitundarelini	WEO	
	Mzinga	Mwanagati	Chairman	
		Magole	WEO	
		Mzinga	WEO	
Ten cell leaders	Chanika	Vikongoro	Ten cell leader	LAM, LRP, LTS, PPR
	Kitunda	Kitundakati	Ten cell leader	
		Kitundarelini	Ten cell leader	
	Mzinga	Mwanagati	Ten cell leader	
		Magole	Ten cell leader	
		Mzinga	Ten cell leader	
Regularization officials	Chanika	Vikongoro	Committee secretary	LTT, LTP
		Ngwale	Committee secretary	
	Kitunda	Kitundakati	Committee secretary	
		Kitundarelini	Committee secretary	
	Mzinga	Mwanagati	Committee secretary	
		Magole	Committee secretary	
Local estate agent	Chanika	Vikongoro	Local estate agent	LAM, LRP, LTS
	Kitunda	Kitundakati	Local estate agent	
	Mzinga	Magole	Local estate agent	

NB: LAM=land access mode; LRP=Land Rights Protection; LTS=Land Tenure Security; LTT=Land Tenure Type; PPR=Property Rights Protection; LTP=Land Tenure Protection; LRP=Land Right Protection

Focus Group Discussion (FGD) was applied to local real estate agents. Local real estate agents are among the actors who deal with informal land market. FGD was used to explore the experiences of informal land market and protection mechanisms during land access, during physical possession and during dispossession. Moreover, protection role by local real estate agents was explored during the discussion. The information collected from the interviews and FGD were transcribed and summarized into statements and quotations, which were used to clarify some of the results obtained in the questionnaires data analysis. In order to get more in-depth extra information, FGD was applied as the means of soliciting more information from them. FGD data were area-based and hence refer to theme coded to reflect certain elements or variables in the questionnaire. Instead of analyzing these wider areas opinions alongside the questionnaires, the researchers chose narratives which were incorporated immediately after the questionnaire finding as triangulating mechanisms.

■4.0 FINDINGS AND DISCUSSION

4.1 Demographic Characteristics of the Respondents

Table 12 shows the demographic characteristics of the respondents in the study areas. The majority of respondents, i.e. 67.5% were males whereas 32.5% were females. Also, in the context of marital status, the majority of respondents (i.e. 88%) were married. This is likely in Tanzania, due to the fact that marriage is regarded with high esteem. In the case of age characteristics, 26% of the respondents were aged 59 years and above. Also in the case of education status, 42% of the respondents were standard seven and the minority were drop-out respondents, equivalent to2%. The details on other respondents' characteristics are as summarized in Table 12.

Table 12 Demographic characteristics of respondents
(Source: Researchers' compilation, 2019)

		Study area 1		Study area 2		Study area 3			
Characteristics	**Category**	**Chanika (%)**		**Kitunda (%)**		**Mzinga (%)**		**Total (%)**	
		Number	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Gender	Male	60	40	49	32	45	28	154	67.5
	Female	26	35	22	30	26	35	74	32.5
Age	Less than 35	15	43	0	0	20	57	35	16
	Between 35 to 43	17	39	5	11	22	50	44	20
	Between 43 to 51	18	40	15	33	12	27	45	20
	Between 51 to 59	9	23	22	55	9	22	40	18
	Above 59	21	37	29	51	7	12	57	26
Marital Status	Married	78	39	59	29	64	32	201	88
	Single	3	30	2	20	5	50	10	4
	Widow	5	29	10	59	2	12	17	7
	Divorced	0	0	0	0	0	0	0	0
Level of Education	Dropout	4	100	0	0	0	0	4	2
	Std seven	43	47	28	31	20	22	91	42
	Sec. education	25	29	33	39	27	32	85	37
	High School	8	47	4	24	5	29	17	7
	College grad.	2	11	3	16	14	73	19	8
	University grad.	4	33	3	25	5	42	12	5
Occupation	Artisan	6	60	4	40	0	0	10	4
	Business	39	36	27	25	43	39	109	49
	Employee	7	23	8	26	16	51	31	14
	Farmer	13	48	8	30	6	22	27	12
	Jobless	11	69	2	13	3	18	16	7
	Retired	7	25	19	68	2	7	28	12
	Other jobs	3	43	3	43	1	14	7	3
Time of stay	Less than 2.9 years	6	46	1	8	6	46	13	6
	Between 3 to 5.9 years	13	17	8	23	14	40	35	15
	Between 6 to 8.9 years	27	40	16	24	24	36	67	29
	Between 9 to 10.9 years	10	36	10	36	8	28	28	12
	Above 11 years	30	32	36	42	19	22	85	37

4.2 Land Tenure Status in Study Areas

The descriptive statistics for the different tenure modes can be found in Appendix (section F). Figure 2 summarizes the prevalence of formal tenure in the form of CROs (title documents) in the study area. It can be noted that only 3% of landholders have title documents while 30% have not holding any document, 7% have written will document, 45% have sale agreement document and 15% had Residential License (RL) document. This indicates that 82% of informal landholders protect their land holdings through informal mechanisms. These informal mechanisms include use of sale agreement document and social recognition for those without any documents and this could be due to cost and long process of acquiring title document from formal authorities (Kusiluka & Chiwambo, 2018). The use of informal mechanisms to protect rights were also evident in Kironde (1995) and Moyo (2006) and most recent work by Alananga (2018b) while the use of legal title documents in informal settlement is very minimal.

An extract from the descriptive statistics in Appendix is provided in Table 13. It can be observed that perceived tenure security is relatively high ranging between 93 to 96 percent and the constraints that people face are relatively low. The highest level of constraints is around 65 percent for title processing. In terms of protection of rights, Table 13 suggests that the highest protection come from physically staying in the land with around 88 percent in the weighted mean score scale. This is also the same for sitting sellers who perceive a higher protection at around 86 percent. The practice of relying on Non Transferable Rights (NTRs) seems to be marginally supported in this study, specifically for protecting rights. The findings in Table 13 suggest that NTRs could be considered land rights protection mechanisms to the magnitude of only 24% of all the respondents in the sample.

4.3 Willingness to Change Land Tenure Status

Based on descriptive statistics in Table 13, willingness to change tenure ranges between 20% to 73% with an average at 45%. This is relatively weak, indicating that almost less than half of the expected willingness can be achieved in this study area. Table 14 summarizes the ranking of willingness to change LTTs based on Standardized Mean Score. It can be noted that informal dwellers are willing to change their LTTs status towards having formal land title documents. Willingness to have land title document was ranked the first while group tenure was ranked the last category. From the interview conducted in regularization offices – which were established to facilitate regularization programs, the results have shown that people are willing to process titles so as to have FLT status, however some informal

dwellers are fear to change their LTTs, partly because they want to avoid losing their land rights by providing access road to others and to avoid land charges (taxes) from the government after changing their LTT towards formal ones, which is surprisingly in line with Payne et al. (2009).

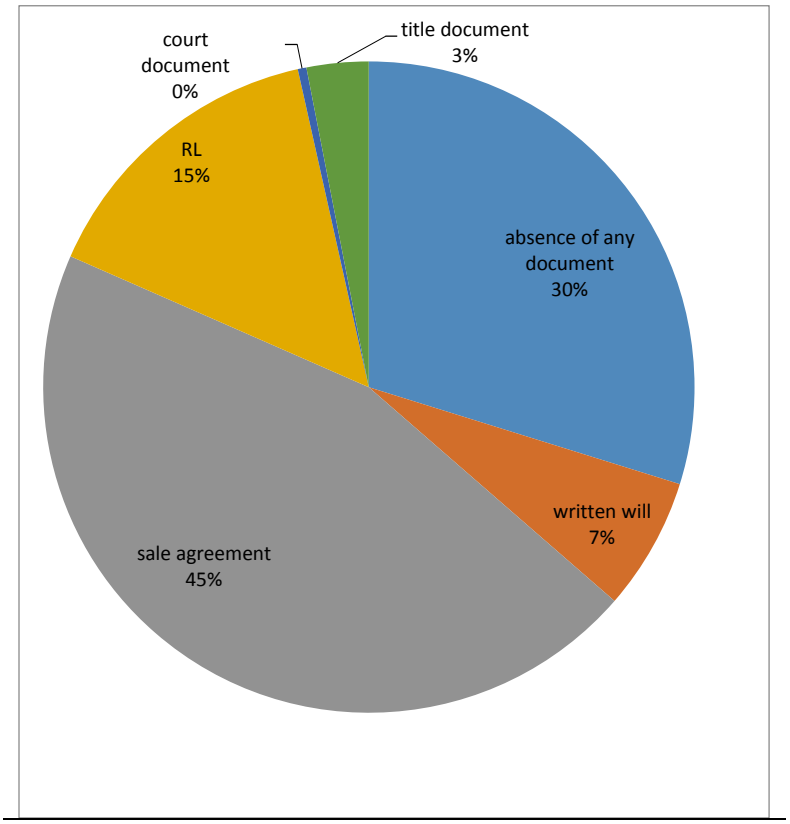

Figure 2 Tenure status in the study areas

Table 13 Descriptive statistics for the aggregate indicators

Code	Description	Min.	Max.	Mean	Std
A	**Land Tenure Security**				
A1	General right to use	0.52	1.00	0.96	0.09
A2	General Control right	0.48	1.00	0.92	0.11
A3	Right to transfer	0.53	1.00	0.93	0.11
B	**Constraints in informal land tenure**				
B1	Legal constraints	0.00	1.00	0.33	0.19
B2	Physical constraints	0.20	1.00	0.44	0.14
B3	Personal constraints percentage	0.20	1.00	0.45	0.14
C	**Willingness to Change Land Tenure Type**	**0.20**	**0.73**	**0.45**	**0.09**
D	**Title processing constraints**	**0.20**	**1.00**	**0.65**	**0.14**
E	**Perceived protection**				
E1	Protection of rights after purchase	0.25	0.71	0.45	0.10
E2	Protection by documents after purchase	0.20	1.00	0.44	0.18
E3	Actors protection during physical stay	0.33	1.00	0.65	0.11
E4	Protection by living during physical stay	0.20	1.20	0.88	0.19
E5	Protection by NTR during physical stay	0.20	0.65	0.24	0.07
E6	Protection by legal document during disposition	0.20	0.95	0.48	0.17
E7	Actors protection during disposition	0.20	0.93	0.67	0.12
E8	Protection by living during disposition	0.20	1.20	0.86	0.22
E10	**Boundary protection after purchase**	**0.20**	**0.73**	**0.46**	**0.10**

In regularized settlements in Tanzania, land for provision of road must be provided as such legal title documents and road provision are positively correlated. Under the regularization, rules need to be observed including the minimum plot size of 90-300 sqm as per Government Notice No. 93 published on 9/3/2018 about planning space standards, zoning rules with clear demarcation of residential, commercial, and institution areas. In these study areas, the flexibility is often adaptable with the exception of roads (accessibility) and the

title to be prepared for the minimum plot size must be met. Other conditions such as zoning or hazard land, though not investigated in this study, do not pose any threat or barrier to regularization. Other people are willing to formalize their land titles but their plots are in reserved areas and hence are unable to climbs up the land tenure ladder. As reported by one of the respondents:

> *[...] people are willing to have formal titles status but they are obstructed by others who are not ready to lose their land by providing access road to others. As we have regularization program now, extra effort is used to negotiate with landowners to provide road to others so as survey can take place.*

The results however, show that informal dwellers are somehow willing to change their land tenure status from ILTs to FLTs. The majority are however satisfied with LTS provided through informal mechanisms, they want only to be recognition by authority. For instance, LTT ranked No. 6, i.e. landholders do not want to change their LTTs, suggest that either they are satisfied with LTS provided by informal mechanisms or are indifferent across LTTs. In Table 14, anti-eviction is referred to as a passive decision by the government to tolerate informal and even illegal settlements. To clarify on the word title, the use of the word legal title is sometimes used (called CRO) and it differs from the concept of legally recognized documents of ownership which include RL and sale agreements that qualify as contracts under the contract ordinance.

Table 14 Ranking willingness to change LTT
(Source: Authors' household survey in 2019)

Change of LTT	Mean	Std. Dev.	Std. mean	Ranking
Written title Document	4.40	1.250	3.52	1
Legal recognized	3.55	1.629	2.18	2
Customary recognized	1.54	.940	1.64	3
Adverse possession	2.91	1.777	1.64	4
Ant eviction	1.29	.827	1.56	5
I don't want to change	1.60	1.051	1.52	6
Group tenure	1.66	1.326	1.25	7

NB: The minimum was 1, Maximum was 5, Valid N (list wise) =228

4.5 Willingness to Change Land Tenure According to Age

The results from Table 15 show the relationship between willingness to process title across age groups of the respondents. The outcomes depict that the lowest two levels of willingness comprise over 40% of the respondents in each case and the highest willingness to title is only observed by 5% most of whom being the youngest. This implies that the majority of the oldest age group is not interested with higher LTTs, whereby the lowest age group is more interested to change their LTTs from informal to formal. At young age, the majority of youth are purchasing small size plots in informal areas to start life because of relatively low cost, but when the family grows, they start to search for large size plots on which other livelihood activities can be performed. This lifecycle housing demands can be used to explain the reluctance in land title uptake as the owned larger plots are in principle costly to title and most likely in informal areas. Formal plots are often standardized and to the preference of the youth. According to engelvoelkers (2012), it is reported that, young people between 26 – 35 years are the major purchaser of informal land rights since they are starting life and hence purchase small piece of land to start life and are not interested by formal titles which are costly. Some trend in the willingness to process CROs and age can also be noted in Figure 3 whereas the older seems to be more willing than the younger ones. However, across residential location, e.g. Kitunda, suggest a relatively higher willingness across age group compared to the other two wards.

Table 15 Relationship between willingness according to age
(Source: Researchers' compilation in May 2019)

		Age category					Total (%)
		Less than 35	Between 35 to 43	Between 43 to 51	Between 51 to 59	Above 59	
Willingness of respondent to process title	Percentage below 0.43	19	27	19	15	20	**43**
	Percentage between 0.44 to 0.50	8	16	23	20	33	**41**
	Percentage between 0.51 to 0.58	28	16	8	24	24	**11**
	Percentage between 0.59 to 0.66	11	11	44	22	11	**4**
	Percentage above 0.66	67	0	0	0	33	**1**
Total (%)		**16**	**20**	**20**	**18**	**26**	**100**

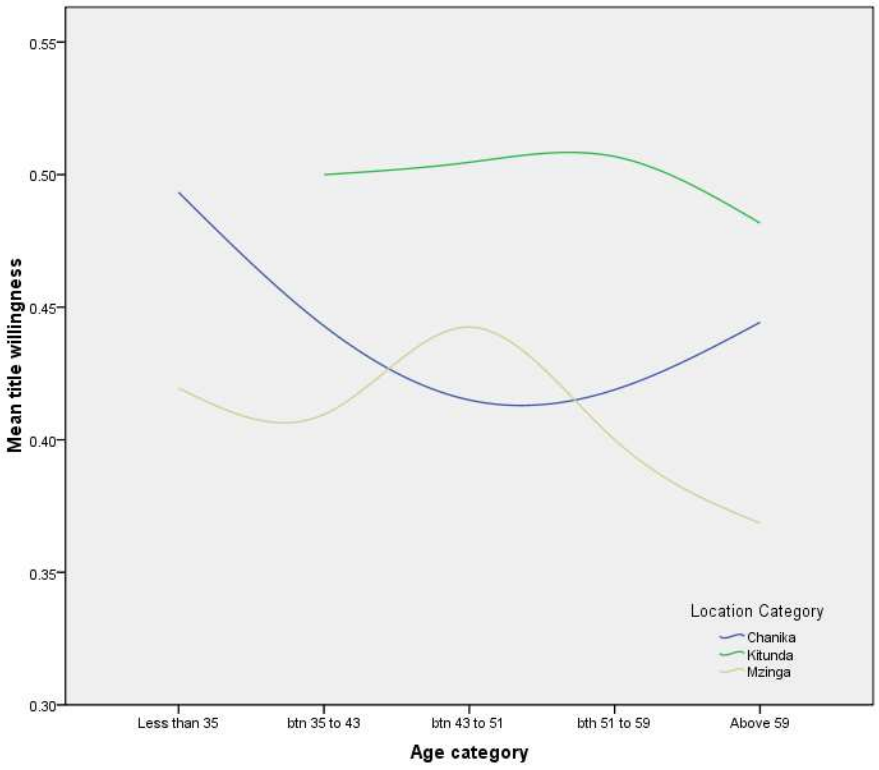

Figure 3 Willingness to process title according to age group and location

4.6 Willingness to Change Land Tenure Status According to Gender

Table 16 shows that willingness to change LTT from informal to formal LTS is very high to male landholders, presenting 75% against females who presented 25% at willingness level above 66%. At the same time, males were observed to be majority in number at below 43% of willingness level, presented by 72% against women who were presented by 28%. This indicate that the level of willingness to have formal title is very high among informal landholders and male have a higher willingness to have formal title than female while for the level of below 43% willingness, females are fewer than males. Majority of female willingness to process title are at 44% to 50%. Babalola and Hull (2019) informed that females have no access to informal land rights unless when they have economic power, therefore their willingness to change title is relatively low. Alananga and Moyo (2018) observed that women land access is limited due to lack of land access information, that is when access to information increases, then the rate of women access to land would also increase. Therefore, the low rate of willingness to process title among women is due to little concern about land rights in a society dominated by patriarchal relations.

Table 16 Relationship between willingness according to gender
(Source: Researchers' compilation in May 2019)

		Gender		Total (%)
		Female	Male	
Willingness of respondent to process	Percentage below 0.43	28	72	42
	Percentage between 0.44 to 0.50	40	60	40
	Percentage between 0.51 to 0.58	35	65	11
	Percentage between 0.59 to 0.66	30	70	5
	Percentage above 0.66	25	75	2
Total		32	68	100

4.7 Willingness to Change Land Tenure According to Education Levels

Relationship between willingness to process title according to education level was investigated. The result from Table 17 shows that in all education categories, majority of respondents are willing to process title by below 50%. The education category with the highest willingness to process title is the standard seven category with 100% willingness above 66%. The second education category with high willingness to process formal title is the secondary education, whereby 60% of respondents are willing to process formal title by 59% to 66% percentage willingness. Under the university category, the result indicates that respondents are willing to process formal title by

below 58% willingness level. This demonstrates that willingness to process title is observed to be lower among highly educated group and higher among none educated. It also implies that higher education group can secure their land rights through awareness of legal land rights while low educated group perceive higher protection from title document. Therefore, willingness among low educated group to change land title is high because they do not have alternative means to protect their land rights.

Table 17 Relationship between willingness according to education
(Source: Researchers' compilation in May 2019)

		Education Category						
		Drop out	**Std seven**	**Sec. education**	**High School**	**College grad.**	**University grad.**	**Total (%)**
Willingness of respondent to process title	Percentage below 0.43	1	35	33	10	16	6	42
	Percentage between 0.44 to 0.50	2	41	41	7	4	4	40
	Percentage between 0.51 to 0.58	0	50	37	4	4	8	11
	Percentage between 0.59 to 0.66	10	20	60	0	10	0	5
	Percentage above 0.66	0	100	0	0	0	0	2
Total (%)		**2**	**40**	**39**	**7**	**8**	**4**	**100**

4.8 Constraints towards Changing Land Tenure Status

From the interview conducted with regularization officers at sub wards level, it was noted that there are many constraints which hinder people to process formal titles and hence majority remain under informal mechanisms of protecting their land holdings. The findings from interview demonstrated that people are not familiar on the advantages of having titles. This was illustrated by program secretary at Mwanagati sub ward as he pointed out that:

> *Informal landholders are not aware on the advantages of having formal titles [...] people think that it is a project owned by individual and hence perceive negatively against the project. People think that this program is a political move and not for their own good. They think that, by having sales agreement it is enough to protect their right. When we started initiating this program, people perceived negatively to initiator who was the sub ward chairman to the extent that he left his family fearing people's attack due to negative perception until people started to accept the program and this was for security purposes as people perceived negatively towards him that he wants to make illegal dealings to their land.*

On the other hand, it was narrated by the respondents that most of the residents under ILT are complaining about the long process of acquiring the title, high cost, and high charges in relation to formal land rights possession and hence majority of informal landholders opt to use informal LRP mechanisms.

> *People are reluctant to pay survey cost by claiming that amount charged are high despite with reduction of survey cost amount announced by the minister that should be as minimum of 150,000/=Tsh [...] Still, modality of paying such amount is very low".*

However, four main constraints were investigated and ranked as indicated in Table 18. The said table exhibits that cost of land title processing is the first limiting factor towards processing of formal land title. The second limiting factor was long process (bureaucratic), followed by the third rank which is long waiting period for title issuance. Essentially, constraints limit people to change LTT and that may cause those who are so limited to have lower LTS. The observations based on cost and time delay were also noted by De Soto (2000) – in Egypt where landholders faced long procedures to acquire formal titles about 77 steps which took up 14 years; in Peru, De Soto (2000) noted that more than 207 procedurals are to be taken to acquire formal titles while in the Philippines and Haiti, it involves 168 procedural steps and 65 respectively. Despite the costs and long procedures which have been observed to limit regularization program, Makupa and Alananga (2018) informed that, in some cases in Tanzania, central government and institutions which carry out regularization programs have limited capacity to undertake large scale regularization in urban informal settlement. Furthermore, the findings by Makupa and Alananga (2018) also expressed that regularization program in Tanzania faces some constraints including limited budget, lack of facilities and personnels.

Table 18 Factors limiting climbing up the LTTs ladder
(Source: Authors' household survey in 2019)

Constraints	Mean	Std. Deviation	Mean/Std. Deviation	Mean/Std. deviation Ranking
Cost constraints to process title	4.60	.78	5.93	1
Long process to acquire title	4.04	.99	4.09	2
Long time to get title	3.97	1.09	3.63	3
Lack of access for survey	2.10	1.42	1.48	4
Hazardous areas	1.61	1.18	1.37	5

NB: The minimum was 1, Maximum was 5, Valid N (list wise) = 228

When willingness to process title is compared to constraint faced by a household during CRO processing, Figure 4 suggests that households face higher levels of constraints according to education level than their willingness – a clear indicator that constraints have a great share in the observed reluctancy to process title. This was also the case across education and gender categories. It seems that the link between constraints and willingness to process title are limitedly shaped by demographic characteristics of landholder.

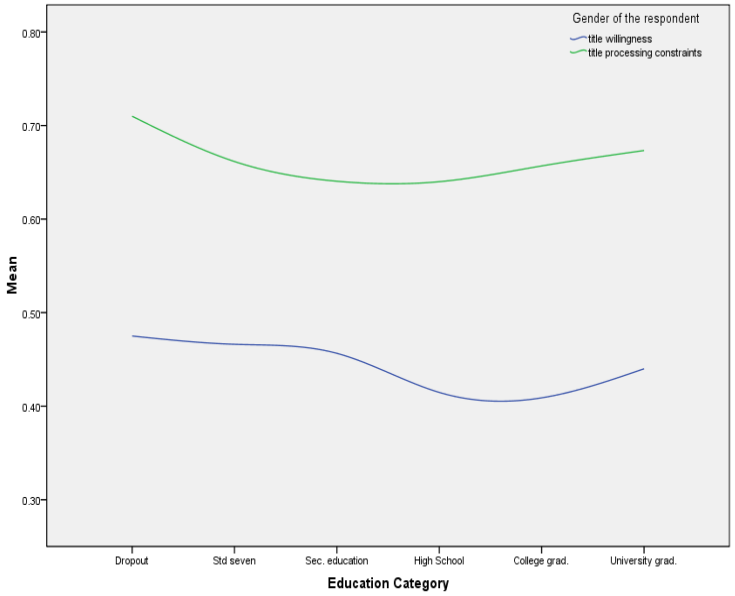

Figure 4 Constraint and willingness in processing CROs based on education categories

4.9 Constraints towards Title Processing According to Age

Relationship between constraints towards title processing based on age was further investigated. The result in Table 19 shows that 22% of the youngest age group and those aged between 35 to 43 years (33%) faced some constraints towards title processing by more than 86% while those aged above 59 years (12%) also faced constraints towards title processing by a similar magnitude. This implies that the youngest age group is more affected by title processing constraints than the oldest age group. Possibly, costs for title processing could have more contribution because the majority of the youngest age group has limited capital.

Table 19 Constraints towards title processing according to age
(Source: Authors' household survey in 2019)

		Age category					Total
		Less than 35	Between 35 to 43	Between 43 to 51	Between 51 to 59	Above 59	
Constraints category	Percentage below 0.45	6	12	29	35	18	**8**
	Percentage between 0.46 to 0.59	16	22	19	25	18	**14**
	Percentage between 0.60 to 0.72	16	20	19	15	30	**59**
	Percentage between 0.73 to 0.86	19	19	25	12	25	**14**
	Percentage above 0.86	22	33	11	22	12	**5**
Total		**16**	**20**	**21**	**18**	**25**	**100**

4.10 Constraints towards Title Processing According to Gender

The type of constraints which were investigated in this study are costs, long procedures, time spent to get title, lack of access and hazardous areas. The question for this constraints aimed at measuring the levels of constraints that individuals face to process titles, where the levels were; very much, moderate, low, very low and none constraint. During data processing, the index of the degree at which an individual is constrained was created with five percentiles levels. Based on Table 20, it shows that constraints to change LTT from informal to formal LTS is very high to male landholders, presenting at all constraints level than female. However, at the highest level of constraints (i.e. above 86%), females were dominant – 64% compared to men with 36%. This indicates that the level of constraints to have formal title processing is very high among female landholders than male. It may be associated with capital constraints and limited chances to have land rights in informal areas, in tandem with the view relayed by Makupa and Alananga (2018).

Table 20 Constraints towards title processing according to gender
(Source: Authors' household survey in 2019)

		Gender		Total
		Female	**Male**	
Constraints severity category	Percentage below 0.45	30	70	9
	Percentage between 0.46 to 0.59	34	66	14
	Percentage between 0.60 to 0.72	30	70	58
	Percentage between 0.73 to 0.86	31	69	14
	Percentage above 0.86	64	36	5
Total		32	68	100

4.11 Constraints towards Changing Land Tenure According to Education Levels

Relationship between constraints to process title based on education was investigated. The results in Table 21 show that from the perspective of education categories, the majority of respondents are facing some constraints to process title. However, the education class with the highest constraints to process title is the standard seven category where 54% are facing constraints to process land title by over 86%. This implies that the highly educated group has the ability to process land title because of greater awareness on procedural steps while the low educated group has little knowledge on title processing.

Table 21 Constraints towards title processing according to education
(Source: Authors' household survey in 2019)

		Education Category						Total
		Dropout	**Std seven**	**Sec. education**	**High School**	**College grad.**	**University grad.**	
Constraints severity category	Percentage below 0.45	0	35	45	10	5	5	**9**
	Percentage between 0.46 to 0.59	0	38	38	6	16	3	**14**
	Percentage between 0.60 to 0.72	2	38	40	8	7	6	**58**
	Percentage between 0.73 to 0.86	3	50	25	9	9	3	**14**
	Percentage above 0.86	0	54	27	0	9	9	**5**
Total		**2**	**40**	**37**	**7**	**8**	**5**	**100**

4.12 Awareness on the Benefits of Changing Land Tenure

Awareness on the benefits of formal title reduces the ability of adopting the informal LRP mechanisms. In this study, the benefits of investigation were based on three parts, i.e. use right, control right and transfer right benefits. Under transfer rights, from Table 22, the results show that by changing LTT from informal to formal, the landholders will benefit more from court bail as the first benefit factor and the mortgage as the second benefit factor. Therefore, informal landholders are aware that by changing land tenure status, it will increase chance for collateral use. De Soto (2000) suggested that changing from ILT to FLT will increase capacity of informal landholder to benefits from land rights. On a related note, Mabogunje (1992) pointed out that awareness on the benefit of changing land tenure status should be adressed to all informal landholders through seminars, lectures and meetings, not only to local leaders but also to all landholders including youth age group, women, and social organization. Interestingly to note, Sheuya and Burra (2016) informed that the change of LTS in Tanzania by issuance of RL has helped informal landholders to acquire loan from formal financial institution.

Table 22 Awareness on the benefit of changing land tenure status
(Source: Authors' household survey in 2019)

Transfer rights	Mean	Std. Deviation	Mean/Std. deviation	Mean/Std, deviation ranking
Benefit on court bail	4.78	.66	7.28	1
Benefit on mortgage	4.76	.69	6.87	2
Benefit on sale	4.68	.84	5.57	3
Benefit on will	4.68	.84	5.57	4
Benefit on rent	4.65	.87	5.37	5
Benefit on lease	4.64	.92	5.04	6
Benefit on corruption during transfer	4.54	1.09	4.16	7
Benefit to surrender	4.43	1.16	3.83	8
Benefit on corruption on change of land use	4.40	1.27	3.45	9

NB: The minimum was 1, Maximum was 5, Valid N (list wise) =228

4.13 Awareness of Title Benefit According to Age

The relationship between awareness of title benefits based on age group is presented in Table 23. It is intriguing to note that no age category had awareness benefit below 53% awareness level. Majority of respondents (86%) were aware on the benefits of title whereby oldest age category, i.e. above 59 years (26%) was observed to be more aware on the benefit of title than the youngest age group, i.e. below 35 years (14%). It was addressed by Galiani and Schargrodsky (2004) that regularization program reduces early (teenage) pregnancy to youth as it was observed that in Argentina, 20.8% of early (teenage) pregnancy observed in informal areas while small percentage of 7.9% were observed in titled areas. Corral and Olea (2020) stated that titled land rights give easily young female-headed households clear chance to claims for property rights using title document while informal land rights give a challenge to young female house head.

Table 23 Awareness on the benefit of changing land tenure status according to age
(Source: Authors' household survey in 2019)

		Age category					Total (%)
		Less than 35	Between 35 to 43	Between 43 to 51	Between 51 to 59	Above 59	
Tenure improvement benefit category	Percentage below 0.36	0	0	0	0	0	**0**
	Percentage between 0.37 to 0.52	0	0	0	0	0	**0**
	Percentage between 0.53 to 0.68	20	20	20	10	30	**5**
	Percentage between 0.69 to 0.84	30	15	5	25	25	**9**
	Percentage above o.84	14	20	23	18	26	**86**
Total		**16**	**20**	**20**	**18**	**26**	**100**

4.14 Awareness of Title Benefit According to Gender

Awareness of benefit of title based on gender is summarized in Table 24. Such awareness is very high among male than to female. The highest level of benefit awareness that is above 84%, males conspicuously dominates by 68% compared to females i.e. 32%. This indicates that the level of awareness on the benefit of title is very high among male than female. This poses a real challenge among women as the literature so far compounds on the need to enhance awareness among females, so that they can prioritize regularization (Cantuarias & Delgado, 2004; Deere & Leon, 2003; Makota, 2018; Payne et al., 2002). This may be associated with the reasons that majority of landholders are male than female. Females have limited chance to have land rights in informal areas and hence awareness on benefit of changing land tenure status may be limited to female (Corral & Olea, 2020).

Table 24 Awareness on the benefit of changing land tenure status according to gender
(Source: Authors' household survey in 2019)

		Gender of the respondent		Total (%)
		Female	Male	
Tenure improvement benefit category	Percentage below 0.36	100	0	**0.4**
	Percentage between 0.37 to 0.52	0	100	**0.4**
	Percentage between 0.53 to 0.68	20	80	**4.3**
	Percentage between 0.69 to 0.84	38	62	**9.2**
	Percentage above o.84	32	68	**85.7**
Total		**32.4**	**67.6**	**100.0**

4.15 Awareness of Title Benefit According to Education Level

The results on the relationship between awareness of title benefit based on education level are presented in Table 25. The results suggest that in the context of education categories, the level of awareness on the benefit of land regularization is very high, i.e. above 85%. However, the highest level of awareness is among those with the least education, i.e. 40% and those with the highest education have the least share of awareness, i.e. 5%. Lanjouw and Levy (2002) reports that less educated landholders are in informal land rights and more educated landholders were observed in formal land rights, therefore awareness on the benefit of regularization and demand for regularization should be high to low educated group. They also added that more educated people tend to reside in the areas with adequate social services like supply of water services electricity, health services while in informal areas these services are limitedly supplied. Implausible as it may seem, it reflects the reality on the ground. High education provides a mechanism to protect informally held rights as it ensures access to tenure information, government programs and most importantly is income. The doubts on tenure are concentrated among the low educated groups who potentially believe that a title document would be beneficial to them.

Table 25 Awareness on the benefit of changing land tenure status according to education
(Source: Authors' household survey in 2019)

		Education Category						
		Drop-out	**Std seven**	**Sec. education**	**High School**	**College grad**	**University grad**	**Total (%)**
Tenure improvement benefit category	Percentage below 0.36	0	0	100	0	0	0	**0.4**
	Percentage between 0.37 to 0.52	0	0	0	0	100	0	**0.4**
	Percentage between 0.53 to 0.68	0	40	40	10	10	0	**4.5**
	Percentage between 0.69 to 0.84	0	43	48	0	0	9	**9.2**
	Percentage above 0.84	2	40	36	8	9	5	**85.5**
Total		**1.8**	**39.9**	**37.2**	**7.5**	**8.3**	**5.3**	**100.0**

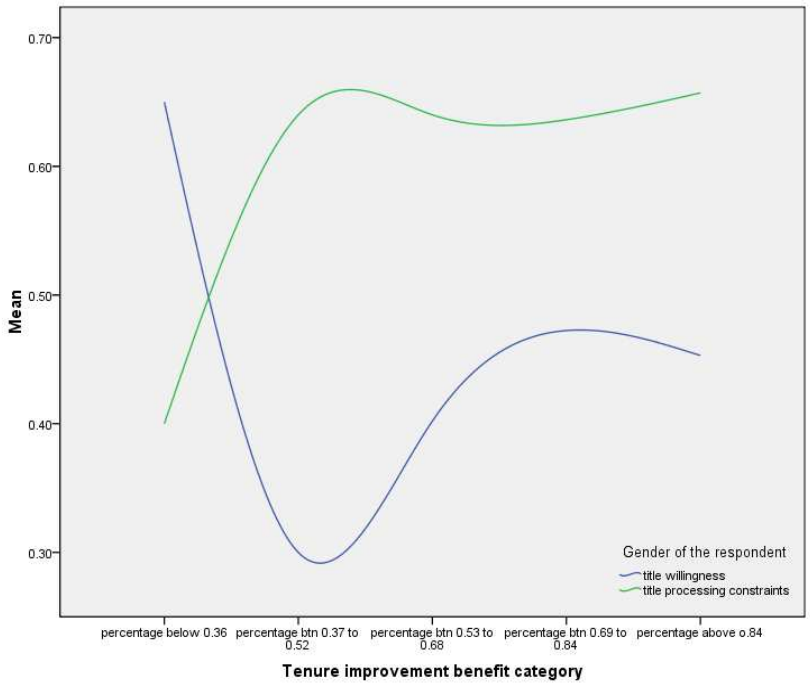

Figure 5 The effect of awareness on land regularization benefits on both constraints and willingness to process CROs

A further examination of the relationship between constraints and willingness to process title is presented in Figure 5 whereas tenure benefits increases, willingness to take titles decline initially and only increases with relatively higher levels of known benefits i.e. beyond 50 percent. Constraints on the other hand increase first and flatten from 40 percent and above. These finding point out on the need of intensive awareness campaigns for the benefits of formal titles because when such awareness is low, the danger is that landholders who have not picked title document will tend to be higher as the constraints are increasingly binding. With higher awareness on benefits, the

gap between willingness and constrains is reduced but not bridged altogether, suggesting that in the current study area there is strong evidence that title processing is constrained rather than emanating from lack of knowledge.

■5.0 CONCLUSION

The majority of informal landholders possess informal documents which they use to protect the rights of their land. In the study areas, there was a regularization program but the efforts to change tenure status under regularization had low pace since only a few number of landholders responded positively to pay the survey fees for regularization. The majority of the oldest age groups were observed to have low interest to change LTTs than young group but their awareness of the benefits of having a title documents was higher than the youngest age group. It was also observed that the costs of processing titles and the time to process titles were the main obstruction factors that limit informal landholders to process land titles. Another noteworthy observation from this study is somehow related to education. Throughout the study, a relatively higher reluctance to process title document was observed among the well-educated. This contradicts the theoretical propositions with regard to education and regularization. In fact, this study posits that both higher education and awareness could be detrimental to regularization intentions of the government. Consistently and over time, the studies have found that urban women in Tanzania are at a relatively higher risk with regard to either ownership or transactions. The observations in this study in regard to gender further compound the previous literature as women are relatively better placed in terms of willingness to title but less privileged when it comes to awareness of the diverse benefits of land title documents. In fact, women seem to demand title documents mainly for tenure security or simply for the sake of having it.

Given the observations from this study that awareness and demographic characteristics of landholder have limited power in explaining the observed reluctance to pick the title documents in regularization projects, the only explanations for such lower reluctance remain constraints. The policy directions therefore should be aligned in favor of minimizing the constraints for the expanded registration of title. Since the major constraints seem to be cost (mainly surveying costs) and time to the acquisition of a title document, it is suggested here that the government, donor communities and the public at large seek for cheaper and less expensive ways of conducting regularization. The fit-for-purpose approach employing remote sensing and GPS technologies could be used as intermediate mechanism to issue titles. It is understandable that there are data quality constraints alongside these approaches but a heavy reliance on traditional planning and surveying approaches in the regularization of land have limited prospects of ending informality in Tanzania. Also, the policy should be clear for the timeframe from the time the land is surveyed to the time of issuance of titles so as to eliminate unnecessary delay which turns into obstacle for acquiring titles to informal landholders. Furthermore, intensive awareness is needed during implementation of regularization program so that it raises more awareness to landholders about the advantages of changing tenure status and land levies associated to land rights after changing the tenure status.

Notes

(1) The 7/12 document is an extract from the land register maintained by the revenue department of the governments of Maharashtra and Gujarat, states in India which have land rights information. It gives the name of the owner of the land and its cultivator, the area of the land, the type of cultivation – whether irrigated or rain fed, the crops planted in the last cultivating season. It also records loans extended to the land owner given by government agencies, including the purpose – such as loans or subsidies for buying seeds, pesticides or fertilizers, for which the loan was given, the loans could be given to the owner or the cultivator. It is one of the documents that provide evidence of the ownership of the land it represents.

(2) Under a socialist Tanzania, neighborhoods were structured into ten cells which principally mean 10 nearby households or houses. A leader was then selected for the 10 households, the so called ten-cell-leader. This however does not automatically coincide with what ten-cell-leaders are today. They still exist but cover larger areas and because of Political Multiparty System, they are representative of Chama Cha Mapinduzi (CCM) members only which may not be neighboring houses.

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Appendix: Descriptive Statistics

Code	Description	N	Min.	Max.	Mean	Std
Code	***Land Tenure Security***					
A1	**General right to use**	**228.00**	**0.52**	**1.00**	**0.96**	**0.09**
A1.1	Right of decision making to use property	228	3	5	4.90	0.37
A1.2	Right to apportion	228	3	5	4.89	0.37
A1.3	Right to enjoy	228	1	5	4.87	0.48
A1.4	Right to change use	228	1	5	4.78	0.69
A1.5	Right of way leave	228	1	5	4.47	1.09
A2	**General Control right**	**228.00**	**0.48**	**1.00**	**0.92**	**0.11**
A2.1	Right to exclude others	228	3	5	4.90	0.35
A2.2	Right to control conflict	228	1	5	4.51	0.92
A2.3	Right to demand compensation	228	1	5	4.59	0.77
A2.4	Right to control boundary	228	1	5	4.76	0.63
A2.5	Right to control way leave	228	1	5	4.33	1.16
A3	**Right to transfer**	**228**	**0.53**	**1.00**	**0.93**	**0.11**
A3.1	Right to rent property	228	1	5	4.84	0.58
A3.1	Right to pass will	228	1	5	4.81	0.63
A3.2	Right to sell property	228	1	5	4.75	0.79
A3.13	Right to lease a property	228	1	5	4.79	0.70
A3.4	Right to surrender	228	1	5	4.08	1.49
A3.5	Right to mortgage	228	1	5	4.56	0.90
A3.6	Right to court bail	228	1	5	4.55	0.91
A3.7	Right to bond the property	228	1	5	4.65	0.82
B	**Constraints in informal land tenure variable**					
B1	**legal constraints**	**228**	**0.00**	**1.00**	**0.33**	**0.19**
B1.1	Tangible legal evidence	228	0	5	2.03	1.41
B1.2	Legal witness	228	0	5	1.67	1.11
B1.3	Legal enforcement	228	0	5	1.59	1.05
B1.4	Corruption	228	0	5	1.33	0.79
B2	**Physical contraints**	**228**	**0.20**	**1.00**	**0.44**	**0.14**
B2.1	Flood constraints	228	1	5	1.48	1.01
B2.2	Slope constraints	228	1	5	1.46	0.89
B2.3	Access constraints	228	1	5	1.82	1.11
B2.4	Overcrowding constraints	228	1	5	2.16	1.27
B2.5	Lack of garbage site	228	1	5	2.91	1.57
B2.6	Poor sanitation	228	1	5	3.63	1.47
B2.7	Absence of boundary demarcation	228	1	5	2.00	1.24
B3	**Personal constraints percentage**	**228**	**0.20**	**1.00**	**0.45**	**0.14**
B3.1	Personal constr on lack of security	228	1	5	2.16	1.35
B3.2	Personal constr on public water	228	1	5	4.46	1.03
B3.3	Personal constr on lack of electricity	228	1	5	2.25	1.39
B3.4	Personal constr on people surround	228	0	5	1.98	1.21
B3.5	Personal constr on feeling about area	228	0	5	1.57	1.00
B3.6	Personal constr about corruption	228	0	5	1.25	0.74
C	**Willingness to Change Land Tenure Type**	**228**	**0.20**	**0.73**	**0.45**	**0.09**
C1	I dont want to change	228	1	5	1.60	1.05
C2	I want to be recognized	228	1	5	3.55	1.63
C3	I want any Written title Document	228	1	5	4.40	1.25
C4	Customary tenure should be recognized	228	1	5	1.54	0.94
C5	Only ant eviction	228	1	5	1.29	0.83
C6	Only adverse possession	228	1	5	2.91	1.78
C7	I want group tenure	228	1	5	1.66	1.33
C8	I want a granted Certificate of Occupancy	228	1	3	1.11	0.37
D	**Title processing constraints**	**228**	**0.20**	**1.00**	**0.65**	**0.14**
D1	Cost constraints to process title	228	1	5	4.60	0.78
D2	Long process to acqure title	228	1	5	4.04	0.99
D3	Long time to get title	228	1	5	3.97	1.09
D4	Lack of access for survey	228	1	5	2.10	1.42
D5	Hazardous areas	228	1	5	1.61	1.18

Code	Description	N	Min.	Max.	Mean	Std
E	**Perceived protection**					
E1.	**protection of rights after purchase**	**228**	**0.25**	**0.71**	**0.45**	**0.10**
E1.1	Protection by construction materials	228	1	5	2.57	1.68
E1.2	Protection by use foundation	228	1	5	2.44	1.62
E1.3	Rented house near	228	1	5	1.27	0.84
E1.4	Use of security guard	228	1	5	1.19	0.71
E1.5	Use of neighborhood	228	1	5	2.46	1.49
E1.6	Farming the site	228	1	5	2.35	1.61
E1.7	use of wall	228	1	5	1.50	1.14
E2	**protection by documents after purchase**	**228**	**0.20**	**1.00**	**0.44**	**0.18**
E2.1	Protect using sale agreement	228	1	5	3.23	1.88
E2.2	Protect using ten-cell leaders	228	1	5	3.30	1.55
E2.3	Protect by use of subward	228	1	5	3.07	1.53
E2.4	Protect using money	228	1	5	1.12	0.50
E2.5	Protect by sale agreement	228	1	5	2.83	1.39
E2.6	Protect by will after possission	228	1	4	1.51	1.03
E2.7	Protection by court doc	228	1	5	1.35	0.83
E2.8	Protection by use of public utilities	228	1	5	1.81	1.02
E3	**Actors protection during physical stay**	**228**	**0.33**	**1.00**	**0.65**	**0.11**
E3.1	Protection by neighbors	228	1	5	3.31	0.99
E3.2	Protection by ten cell	228	1	5	3.68	0.69
E3.3	Protection by sub ward	228	1	5	3.36	0.88
E3.4	Protection by estate agent	228	1	5	1.46	0.93
E3.5	Protection by lawyers	228	1	4	1.35	0.74
E3.6	Protection by relatives	228	1	4	2.55	1.23
E4	**Protection by living during phsical stay**	**228**	**0.20**	**1.20**	**0.88**	**0.19**
E4.1	Protection by use of building	228	1	5	3.52	0.95
E4.2	Protection by long stay	228	1	5	3.37	0.84
E5	**Protection by NTR during phsical stay**	**228**	**0.20**	**0.65**	**0.24**	**0.07**
E5.1	Protection by education status	228	1	5	1.30	0.71
E5.2	Protection by political status	228	1	5	1.21	0.61
E5.3	Protection by artist status	228	1	5	1.14	0.54
E5.4	Protection by income status	228	1	5	1.09	0.41
E6	**Protection by legal document during disposition**	**228**	**0.20**	**0.95**	**0.48**	**0.17**
E.6.1	Sale agreement during disposition	228	1	5	3.22	1.17
E.6.2	Protection by will during disposition	228	1	4	1.36	0.91
E.6.3	Use of court doc during disposition	228	1	4	1.43	0.93
E.6.4	Use of public utilities doc during disp	228	1	5	1.99	1.10
E7	**Actors protection during disposition**	**228**	**0.20**	**0.93**	**0.67**	**0.12**
E7.1	Neighborhood protection	228	1	5	3.33	1.09
E7.2	Ten cell protection	228	1	5	3.67	0.79
E7.3	Sub ward protection	228	1	5	3.45	0.88
E7.4	Estate agent protection	228	1	5	1.65	1.05
E7.5	Lawyer protection	228	1	5	1.61	1.03
E7.6	Relatives protection	228	1	4	2.48	1.23
E8	**protection by living during disposition**	**228**	**0.20**	**1.20**	**0.86**	**0.22**
E8.1	Protection by building structure	228	1	5	3.45	1.02
E8.2	Protection by long stay	228	1	5	3.31	0.96
E9	**protection by NTR during disposition**	**228**	**0.20**	**0.65**	**0.23**	**0.08**
E9.1	Protection by education status	228	1	5	1.30	0.72
E9.2	Protection by political status	228	1	5	1.18	0.59
E9.3	Protection by artist status	228	1	5	1.11	0.45
E9.4	Protection by income status	228	1	5	1.09	0.41
E10	**Boundary protection after purchase**	**228**	**0.20**	**0.73**	**0.46**	**0.10**
E10.1	Protection of boundary by trees	228	1	5	2.99	1.66
E10.2	Protection of boundary by blocks	228	1	5	3.79	1.69
E10.3	Protection of boundary by beacon	228	1	5	1.24	0.74
E10.4	Protection of boundary by fence	228	1	5	1.87	1.37
E10.5	Protection of boundary by natural evidence	228	1	5	2.63	1.68
E10.6	Protection of boundary by wall	228	1	5	1.32	0.93

Code	Description	N	Min.	Max.	Mean	Std
F	**Land Access Modalities**					
F1	Access through Government allocation	228	0	1	0.004	0.07
F2	Access through Inheritance	228	0	1	0.118	0.32
F3	Access through Long possession	228	0	1	0.009	0.09
F4	Access through Purchase	228	0	1	0.868	0.34